

## Thermal Studies of Poly Ether Imide

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Engineering polymers find new applications every year. They are of special interest to Saudi Arabia for two reasons: The launch of an overall country empowerment plan "Saudi Vision 2030" and rapid development of the Saudi polymer industry. The plan "Saudi Vision 2030" focus is to increase the local content of products and services in the country up to 40 %, with focus on the defense, and oil and gas sectors. Polyetherimide (PEI) is an amorphous, amber-to-transparent thermoplastic with relatively high strength and high chemical stability characteristics that made it a popular engineering plastic. In this work, the thermo oxidative degradation behavior of Poly Ether Imide (PEI) was studied by thermo gravimetric analysis (TG), in order to study the thermal behavior and elucidate the high temperature decomposition. Thermograms at different heating rates in an air atmosphere are presented. A differential method (Kissinger Method) was used to calculate activation energies for the thermo oxidative decomposition reaction.